



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,686	02/19/2004	Maged E. Beshai	92644-33	1093
22463	7590	12/09/2008		
SMART AND BIGGAR 438 UNIVERSITY AVENUE SUITE 1500 BOX 111 TORONTO, ON M5G2K8 CANADA			EXAMINER NGO, NGUYEN HOANG	
			ART UNIT	PAPER NUMBER
			2416	
			MAIL DATE	DELIVERY MODE
			12/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/780,686

**Applicant(s)**

BESHA, MAGD E.

**Examiner**

NGUYEN NGO

**Art Unit**

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

This communication is in response to the amendment of 9/5/2008. All changes made to the Claims have been entered. Accordingly, Claims 17-25 are currently pending in the application.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beshai (US 6876649), in view of Langevin et al. (US 20030081548) hereinafter referred to as Beshai and Langevin.

**Regarding claim 17, 22-25**, Beshai discloses a polyphase circulating switch (high-capacity WDM-TDM packet switch, col5 lines 65-67 and figure 1) comprising:

a plurality of switch modules (packet switch 20 includes a plurality of edge modules 22 and 24, col6 lines 1-10 and figure 2)

a first plurality of clockwise rotators (30 seen from figure 2); and

a second plurality of counterclockwise rotators (32 seen from figure 2);

wherein each of said switch nodules is communicatively connected through a dual channel to each clockwise rotator and to each counterclockwise rotator (connections of edge modules as seen from figure 2 and 3, col7 lines 15-38). It should further be noted that figure 3 is similar to applicant's figure 50 in which applicant refers to in the remarks (page 11).

Behsai however fails to specifically disclose of having each clockwise rotators having a respective reference phase and having each counterclockwise rotators having a respective reference phase wherein at least two of said clockwise rotators have different reference phases and at least two of said counterclockwise rotators have different reference phases. Beshai however discloses of the use of well known rotators switches (col6 lines 59-65). In a similar field of endeavor, Langevin discloses of a known rotator switch the sequence of four phases composing the rotation scheme to transfer data (each rotators having a respective reference phase (where the rotation cycle begins), page 3 [0048] and figure 2). Langevin further discloses that rotation is each started at a different rotator phase (having different reference phases, page 15 [0233]). It would have thus been obvious to a person skilled in the art at the time the invention was made to incorporate the concept of starting the rotators at a different reference

phase as disclosed by Langevin into the High-Capacity WDM-TDM packet switch of Beshai in order to efficiently transfer data through the switch with minimal delay.

**Regarding claim 18**, the combination of Behsai and Langevin, more specifically Langevin discloses the polyphase circulating switch of claim 17 wherein each of said clockwise rotators is operable to connect each of said switch modules to each other of said switch modules during a rotation cycle, where said rotation cycle includes a plurality of rotation phases, and each of said counterclockwise rotators is operable to connect each of said switch modules to each other of said switch modules during said rotation cycle (figure 2).

**Regarding claim 19**, the combination of Behsai and Langevin, more specifically Beshai discloses the polyphase circulating switch of claim 17 further comprising:

a plurality of module controllers, each module controller of said plurality of module controllers associated with a switch module of said plurality of switch modules (ingress module comprises an ingress controller, page 4 lines 63-67) ); and

a master controller operable to (core controller, col5 lines 15-16) and:

determine a schedule for data exchange among the switch modules (scheduler associated with the core controller, col5 lines 20-25); and

transmit said schedule to said each module controller (which communicates scheduling results to sources, col5 lines 20-25)

**Regarding claim 20**, the combination of Behsai and Langevin, more specifically Beshai discloses the polyphase circulating switch of claim 19 wherein the master controller is further operable to receive a connection request and select one of said clockwise rotators and one of said counterclockwise rotators for routing the requested connection (adapted to receive connection request, col5 lines 15-25).

**Regarding claim 21**, the combination of Behsai and Langevin, more specifically Beshai discloses the polyphase circulating switch of claim 19 wherein the master controller is further operable to determine a switching delay from each of said switch modules to each other of said switch modules through each of said clockwise rotators and through each of said counterclockwise rotators (col8 lines 1-36).

### ***Response to Arguments***

4. Applicant's arguments with respect to claim17-25 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGUYEN NGO whose telephone number is (571)272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2416

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\*

**Nguyen Ngo**

United States Patent & Trademark Office

Patent Examiner AU 2614

(571) 272-8398

/N. N./

Examiner, Art Unit 2416

/FIRMIN BACKER/

Supervisory Patent Examiner, Art Unit 2416